

Atty Dkt. No.: 10010730-2  
USPN: 10/003,598

**AMENDMENTS TO THE CLAIMS**

1. (Original) A calibration device for confirming or calibrating a biopolymeric array optical scanner, said device comprising:  
a polymer layer comprising at least one fluorescent agent, wherein said device has minimal local and global nonuniformities and is dimensioned for placement in an optical scanner.

2. (Original) The device according to claim 1, wherein said at least one fluorescent agent is distributed substantially uniformly throughout said polymer.

3. (Original) The calibration device according to claim 1, wherein said polymer is selected from the group consisting of acrylates, epoxides, urethanes, polycarbonates, polyolefins, polyetherketones, polyesters, polystyrenes, polyethylstyrene, polysiloxanes, and copolymers thereof.

4. (Original) The calibration device according to claim 1, wherein said polymer is polymethyl-methacrylate.

5. (Original) The calibration device according to claim 1, wherein the thickness of said polymer layer ranges from about 0.25 micron to about 10 microns.

6. (Original) The calibration device according to claim 1, wherein the thickness of said polymer layer ranges from about 0.4 micron to about 1 micron.

7. (Original) The calibration device according to claim 1, wherein said device comprises a single polymer layer.

8. (Original) The calibration device according to claim 1, wherein said device comprises a plurality of polymer layers.

9. (Original) The calibration device according to claim 1, wherein said

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at least one fluorescent agent is present in said polymer in a final concentration ranging from about 1 ppm to about 5000 ppm.

10. (Original) The calibration device according to claim 1, wherein said at least one fluorescent agent absorbs and emits light in the portion of the electromagnetic spectrum to which a photomultiplier tube of said optical scanner is sensitive.

11. (Original) The calibration device according to claim 1, wherein said at least one fluorescent agent absorbs and emits light in the wavelength range selected from the group consisting of ultraviolet, visible and infrared.

12. (Original) The calibration device according to claim 1, wherein said global nonuniformity of said calibration device is less than about 5%.

13. (Original) The calibration device according to claim 1, wherein said local nonuniformity of said calibration device is less than about 5%.

14. (Withdrawn) The calibration device according to claim 1, further comprising at least one region absent said at least one fluorescent agent.

15. (Withdrawn) The calibration device according to claim 14, wherein said at least one region is photobleached.

16. (Original) The calibration device according to claim 1, wherein said polymer layer comprises at least two fluorescent agents.

17. (Original) The calibration device according to claim 1, wherein said polymer layer is selected from the group consisting of a spin-coated polymer layer, a draw coated polymer layer, a roller coated polymer layer, an electrodeposited polymer layer and a sprayed polymer layer.

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18. (Withdrawn) A calibration device for confirming or calibrating a biopolymeric array optical scanner, said device comprising:
- (a) a polymer layer comprising at least one fluorescent agent; and
  - (b) at least one region in said polymer layer absent said at least one fluorescent agent.
19. (Withdrawn) The calibration device according to claim 18, wherein said at least one region is photobleached.
20. (Withdrawn) The calibration device according to claim 18, wherein said device has minimal local and global nonuniformities.
21. (Withdrawn) The calibration device according to claim 20, wherein said global nonuniformity of said calibration device is less than about 5%.
22. (Withdrawn) The calibration device according to claim 20, wherein said local nonuniformity of said calibration device is less than about 5%.
23. (Withdrawn) The calibration device according to claim 18, wherein said polymer is selected from the group consisting of acrylates, epoxides, urethanes, polycarbonates, polyolefins, polyetherketones, polyesters, polystyrenes, polyethylstyrene, polysiloxanes, and copolymers thereof.
24. (Withdrawn) The calibration device according to claim 18, wherein said polymer is polymethyl-methacrylate.
25. (Withdrawn) The calibration device according to claim 18, wherein the thickness of said polymer layer ranges from about 0.25 micron to about 10 micron.
26. (Withdrawn) The calibration device according to claim 18, wherein the thickness of said polymer layer ranges from about 0.4 micron to about 1 micron.

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27. (Withdrawn) The calibration device according to claim 18, wherein said device comprises a single polymer layer.
28. (Withdrawn) The calibration device according to claim 18, wherein said device comprises a plurality of polymer layers.
29. (Withdrawn) The calibration device according to claim 18, wherein said at least one fluorescent agent absorbs and emits light in the portion of the electromagnetic spectrum to which a photomultiplier tube of said optical scanner is sensitive.
30. (Withdrawn) The calibration device according to claim 18, wherein said at least one fluorescent agent absorbs and emits light in the wavelength range selected from the group consisting of ultraviolet, visible and infrared.
31. (Withdrawn) The calibration device according to claim 18, wherein said at least one fluorescent agent is distributed substantially uniformly throughout said polymer.
32. (Withdrawn) The calibration device according to claim 18, wherein said at least one fluorescent agent is present in said polymer in a final concentration ranging from about 1 ppm to about 5000 ppm.
33. (Withdrawn) The calibration device according to claim 18, wherein said device comprises at least two fluorescent agents.
34. (Withdrawn) The calibration device according to claim 18, wherein said polymer layer is selected from the group consisting of a spin-coated polymer layer, a draw coated polymer layer, a roller coated polymer layer, an electrodeposited polymer layer and a sprayed polymer layer.

Claims 35 to 67 (Canceled)

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68. (New) The device according to Claim 1, wherein said device has a slide or plate configuration.

69. (New) The device according to claim 1, wherein said device has a rectangular configuration.

70. (New) The device according to claim 1, wherein said device has a square configuration.

71. (New) The device according to claim 1, wherein said device has a disc configuration.

72. (New) The device according to claim 1, wherein said polymer layer is present on a substrate having a length ranging from about 4 mm to 200 mm.

73. (New) The device according to claim 72, wherein said substrate has a length ranging from about 4 mm to 150 mm.

73. (New) The device according to claim 73, wherein said substrate has a length ranging from about 4 mm to 125 mm.

74. (New) The device according to claim 1, wherein said polymer layer is present on a substrate having a width ranging from about 4 mm to 200 mm.

75. (New) The device according to claim 74, wherein said substrate has a width ranging from about 4 mm to 120 mm.

76. (New) The device according to claim 75, wherein said substrate has a width ranging from about 4 mm to 80 mm.

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77. (New) The device according to claim 1, wherein said polymer layer is present on a substrate having a thickness ranging from about 0.01mm to 5.0 mm.

78. (New) The device according to claim 77, wherein said substrate has a thickness ranging from about 0.1 mm to 2 mm.

79. (New) The device according to claim 78, wherein said substrate has a thickness ranging from about 0.2 mm to 1 mm.

80. (New) A calibration device for confirming or calibrating a biopolymeric array optical scanner, said device comprising:  
a polymer layer comprising at least one fluorescent agent, wherein said device has minimal local and global nonuniformities; and  
a transparent substrate.

81. (New) The calibration device according to claim 80, wherein said transparent substrate is glass.

82. (New) The calibration device according to claim 80, wherein said at least one fluorescent agent is distributed substantially uniformly throughout said polymer.

83. (New) The calibration device according to claim 80, wherein said polymer is selected from the group consisting of acrylates, epoxides, urethanes, polycarbonates, polyolefins, polyetherketones, polyesters, polystyrenes, polyethylstyrene, polysiloxanes, and copolymers thereof.

84. (New) The calibration device according to claim 80, wherein the thickness of said polymer layer ranges from about 0.25 micron to about 10 microns.

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85. (New) The calibration device according to claim 80, wherein said global nonuniformity of said calibration device is less than about 5%.

86. (New) The calibration device according to claim 80, wherein said local nonuniformity of said calibration device is less than about 5%.

87. (New) A calibration device for confirming or calibrating a biopolymeric array optical scanner, said device comprising:  
a polymer layer comprising at least one fluorescent agent, wherein said device has minimal local and global nonuniformities; and  
a substrate having a length ranging from about 4 mm to 200 mm, a width ranging from about 4 mm to 200 mm and a thickness ranging from about 0.01mm to 5.0 mm.

88. (New) The calibration device according to claim 87, wherein said substrate is transparent.

89. (New) The calibration device according to claim 87, wherein said at least one fluorescent agent is distributed substantially uniformly throughout said polymer.

90. (New) The calibration device according to claim 87, wherein said polymer is selected from the group consisting of acrylates, epoxides, urethanes, polycarbonates, polyolefins, polyetherketones, polyesters, polystyrenes, polyethylstyrene, polysiloxanes, and copolymers thereof.

91. (New) The calibration device according to claim 87, wherein the thickness of said polymer layer ranges from about 0.25 micron to about 10 microns.

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92. (New) The calibration device according to claim 87, wherein said global nonuniformity of said calibration device is less than about 5%.

93. (New) The calibration device according to claim 87, wherein said local nonuniformity of said calibration device is less than about 5%.

94. (New) An optical scanner comprising a calibration device according to Claim 1.

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